

10. (Amended) A computer program product comprising:

a computer usable medium having computer readable code embodied therein for

providing a reference to a first service to a second service in a computer system comprising:

computer readable program code devices configured to cause said computer system to effect enabling definition of a service connector interface in conjunction with said first service;

computer readable program code devices configured to cause said computer system to effect subsequently invoking said service connector interface in conjunction with said second service; and

computer readable program code devices configured to cause said computer system to effect gaining reference to said first service by said second service, wherein said computer readable program code devices comprise:

computer readable program code devices configured to cause said computer system to effect retrieving a service instance at said service connector interface;

computer readable program code devices configured to cause said computer system to effect obtaining a service reference from said first service; and

computer readable program code devices configured to cause said computer system to effect returning said service reference obtained from said first service to said second service.

19. (Amended) A method for providing a reference to a first service to a second service in a computer system comprising:

providing for enabling definition of a service connector interface in conjunction with said first service;

providing for specifying a particular version of said first service that said second service desires to invoke;

providing for subsequently invoking said service connector interface in conjunction with said second service; and

providing for gaining reference to said first service by said second service.

Sub 37
28. (Amended) A system for providing dynamic references between services in a computer system comprising:
means for enabling definition of a service connector interface in conjunction with said first service, said definition enabling means includes means for developing a computer program module adhering to said service connector interface in conjunction with said first service;
means for subsequently invoking said service connector interface in conjunction with said second service; and
means for gaining reference to said first service by said second service.

Sub 37
37. (New) A core profile engine for use in gateway or firewall servers for enabling client applications to access plug-in service modules in a distributed computing environment without embedding location and negotiation logic within the client applications, the engine comprising:
an application programming interface in communication with the client applications and adapted with interfaces for processing a request for a service provided by one of the service modules; and
a pluggable interface attaching to the plug-in service modules, wherein the attaching includes providing an initialization parameter comprising a storage location for each of the plug-in service modules;
wherein the pluggable interface further includes a service connector associated with each of the attached plug-in service modules that is adapted to receive the service request from the application programming interface and to return a reference to the one service module providing the service based on the storage location.

38. (New) The engine of claim 37, wherein the plug-in service modules are selected from a group consisting of an authorization plug-in, an authentication plug-in, a notification plug-in, a log plug-in, a group plug-in, an entity identification factory plug-in, and a replication plug-in.

Sub C1
39. (New) A computer-implemented method for providing an application with access to a service without the use of a directory service, comprising:
reading a configuration file with the application to determine an indicator to the service;

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C1
and
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instantiating with the application a service connector for the service based on the indicator;
requesting with the application that the service connector provide access to the service;
first operating the service connector to lookup an instance of the service;
second operating the service connector to obtain a reference to the instance of the service;
and
third operating the service connector to return the reference to the instance of the service to the application.

40. (New) The method of claim 39, wherein the requesting includes an identification of a version of the service for which the application is requesting access.

41. (New) The method of claim 39, further including operating the application to request identification of an interface implemented by the referenced service and operating the service connector to retrieve and return the interface identification to the application for use in utilizing the referenced service.

REMARKS

Claims 1-36 were pending prior to this response. Claims 1, 10, 19, and 28 are amended to address indefiniteness rejections and to include various limitations of dependent claims (i.e., cancelled Claims 3, 13, 23, and 29) to place them in condition for allowance. New Claims 37-41 are added to provide more complete protection of the features of the invention not taught or made obvious by the references cited in the September 3, 2002 Office Action with support being found with reference to Figures 2 and 3A and related text at least at pages 17 and 18. No new matter is added by these amendments with support found in the originally filed claims, figures, and specification. Claims 1, 2, 4-12, 14-22, 24-28, and 30-41 remain for consideration by the Examiner.

Independent Claim 37 (and dependent Claim 38) is directed to a core profile engine as shown in Figure 2 with a pluggable interface for use in attaching to service modules and